WEST VIRGINIA STATE UNIVERSITY COMMENCEMENT
Remarks for Administrator Bolden
May 16, 2015

AS PREPARED FOR DELIVERY

It's great to be here in "almost Heaven, West Virginia." To President Hemphill … to the Board of Governors … to the faculty and staff; to all the parents, grandparents, aunts, uncles, cousins, children, grandchildren, and friends who are with us … it's an honor to share this very special day with all of you.

To the Class of 2015 – this is my favorite part – congratulations! You did it!

HELP WANTED

You are graduating at a pivotal moment in human history. Our planet has a very big "help wanted" sign on it – *trust me on this, you can see it from space (not really)* – and we're counting on your generation. We're counting on you to cure the previously

incurable ... to tackle big challenges like climate change … to teach us to live as one people on this beautiful planet.

These are all great challenges – and if they sound a little intimidating that's because they *are.*

Now, others might prefer to opt out of addressing the big challenges of these times. *You* don't have that luxury. You see, you're about to join a very special group of people known as "West Virginia State alumni."

WEST VIRGINIA STATE UNIVERSITY

Your West Virginia State diploma puts you in some very, very remarkable company:

The company of Chu Berry, the groundbreaking saxophonist;

The company of Leon Sullivan, the legendary civil rights leader;

The company of Carter G. Woodson, the "father of black history."

You are inheriting the legacy of Earl Lloyd, who integrated the NBA; of elected leaders like Harriet Elizabeth Byrd, Augusta Clark and Herbert Fielding; of justices like the Honorable Damon Keith and journalists like Wendell Smith.

You're also a part of a very special "aerospace" legacy. It's the legacy of Rose Agnes Rolls, the first African American woman to receive her pilot's license. It's a legacy that dates back to the days when this institution became the first of six historically black colleges to be authorized by the Civil Aeronautics Authority to establish an aviation program and it's a legacy that continues on today, through your school's membership in the NASA West Virginia Space Grant consortium.

KATHERINE JOHNSON; NASA PIONEER

Now NASA and West Virginia State have something very important in common.

Our legacies are woven together by a remarkable, pioneering American by the name of Katherine Johnson.

Katherine grew up in White Sulfur Springs, West Virginia. She was born in 1918 three years after the birth of the National Advisory Committee of Aeronautics, N-A-C-A, the predecessor of NASA. Fittingly, her birthday is August 26 – national women's equality day.

Katherine's intelligence always outpaced her age. As a young child she used to follow her older brother to the two-room building where he went to school. There, Katherine made an early impression on her brother's teacher – who was amazed at her ability to read at such a young age and invited her to attend summer school.

At this point in history, there were no school options in Sulfur Springs available to African-Americans beyond eight grade. So Katherine's father enrolled Katherine and her brothers and sisters in a school 125 miles away from home. Her mom took a job in the area. Her father was forced to return to Sulfur Springs to earn a living and support his family.

Katharine's high school was part of what was called "the West Virginia Collegiate Institute." Previously it had been known as the West Virginia Colored Institute. Today, it's called West Virginia State University.

Katherine enrolled here at the ripe old age of 10. She would often walk home with her principal after school and he'd point to the constellations of stars in the sky and capture her imagination about the universe. When she graduated– at age 14 – she enrolled for college and at, age 18; she graduated Summa Cum Laude with degrees in French and mathematics

During her studies, a young professor and mentor of Katherine's told her, "*You'd make a good research mathematician and I'm going to see that you're prepared."* When she asked him how she would be able to find work as a research mathematician – remember these were in the days of segregation – he simply told her *"that will be your problem."*

Katherine went on to become one of the first African-Americans to enroll in a graduate program, but she had to drop out when her husband fell ill. A few years later, while on a trip to visit her family in Newport News, Virginia, Katherine's sister told her there were job openings at NASA's Langley Research Center – which at the time was actually N-A-C-A's Center, since NASA hadn't yet been founded.

The next week Katherine moved to Virginia to pursue her dream. The following year, 1953, that dream came true when she took a

job at Langley. She would stay at Langley and with NASA until her retirement in 1986.Originally, Katherine was hired to join a team that was nicknamed “computers who wear skirts.” When the opportunity came to help out the all-male flight research team on what was supposed to be a temporary basis she seized it – and so impressed her male colleagues they chose not to send her back.

During her remarkable three decades at NASA, Katherine calculated the launch window for America’s first human space flight. She verified the calculations for John Glenn’s historical orbit. She calculated the trajectory of Apollo 11’s flight to the moon. She helped lay the groundwork for our Journey to Mars – which I’ll tell you about in a minute. She also helped write the very first textbook on space.

DON’T LISTEN TO THOSE WHO SAY YOU DON’T BELONG

Graduates, as you begin to write your own book – your own story – you will bring with you a piece of Katherine's legacy.
As you look to answer Earth's "Help Wanted" ad, I want to offer you just a few pieces of advice that I think we can glean from her story, as well as a few from my own experiences.

The first, is be bold, be fearless, dream big, and by all means, don't listen to anyone who tells you can't do something or you don't belong. Don't waste your time trying to explain yourself or your identity to anyone. Don't feel like you have to justify why you are where you are. This applies to the workplace or anywhere else.

This is the path that Katherine took as she sat in classes with students several years her senior; when she studied mathematics and enrolled in graduate school during the days of legalized segregation; when she came to Langley and stepped into a "man's world".

It's a path I took when I chased my dream of attending the U.S. Naval Academy and serving my country – just as my father and my uncles had done in World War II, when African Americans had to fight for the right to serve in our Armed Forces.

Growing up in Columbia, SC during the days of segregation, it was an uphill battle. No one in my South Carolina Congressional delegation would provide an appointment nor nomination to the Academy as was required for admission. So I wrote President Johnson asking for help. I never got a response, but that possibly led to Congressman William Dawson of Illinois providing me the appointment I needed to be accepted. Rep. Dawson was himself a veteran of World War I and only the third African American elected to Congress in the 20th century.

After having to fight just for the opportunity to be admitted, my classmates at the Naval Academy did me the honor of electing me class president.

Today, after a 34-year career in the Marine Corps, I have the honor of serving as Administrator of NASA under the nation's first Black President.

Now when I say, “dream big” that doesn’t mean you’ll always know what the future holds. Growing up, I never conceived that some day I’d become a Marine Corps jet pilot, let alone pilot the space shuttle. When I finally made the decision to apply for the astronaut program, I was 34 years old and serving as a Marine Corps test pilot. Before that I had never even thought about being an astronaut – I figured it was just out of the question.

The man who convinced me that I could become an astronaut was a fellow South Carolinian named Dr. Ron McNair. He overcame obstacle-after-obstacle and went on to earn a PhD from

MIT, to become a noted physicist, a highly accomplished jazz saxophonist and a fifth-degree black belt in karate.
Ron reached heights that most never would have thought possible and in 1984 he reached even higher, when he became the second African-American to fly into space.

FAMILY

I would not be here before you today, were it not for Ron and were it not for my parents and my family. Katherine Johnson wouldn't have reached those incredible heights were it not for the sacrifices of her parents and the sage advice of her sister.

None of us would be here were it not for the shoulders on which we stood.

So my second piece of advice is "*don't let a day pass that you don't approach someone who means a lot to you and thank them for just being themselves and for helping you be you.*"

With this in mind, graduates, I hope you'll join me in showing appreciation for your team – the parents and grandparents who cared for you and got you here; your family members and friends who have stood by you and traveled near and far to be with you today. Join me in a round of applause for them.

In my life, I've been blessed to go to space four times and to travel to nearly every corner of our planet. Nothing I've seen compares to the awe of looking into the eyes of my children and grandchildren. If you choose to start a family, love and care for them every single day as your loved ones have cared for you.

REACH FOR NEW HEIGHTS

My fourth piece of advice is to never stop reaching for new heights, even if you don't know exactly what they look like or what they will be.

Katherine never stopped; and I hope that you won't either – and that goes for both you personally and for your generation.

For all the challenges we face, this is a remarkable time to be starting a career.

As a country, we've created 12.3 million new jobs and have experienced 62 consecutive months of job growth. Wages are rising. The deficit is falling. More Americans are buying homes. More businesses are hiring. More manufactures are ordering durable goods – fueled, I might add, by a sizable increase in aircraft orders. We're less dependent on foreign oil than we've been in nearly three decades. Fewer of us have to go without health care or choose between filling prescriptions and filling the gas tank.

In a much broader sense, so much of the things that once were the purview of science fiction are now facts of life:
Being able to have a video chat with a loved one half a world away on your phone, laptop or tablet; watching a movie that's been beamed down to earth via satellite; posting a high resolution photograph of your adorable little niece or nephew in real-time on your social media site of choice.

I call your generation the "space generation" because of the expansive way you look at our world, our universe and the possibilities they contain.

You live in a world where astronauts from many nations fly together in space every single day and where we're preparing to extend the human presence farther into the solar system. That also used to be the stuff of science fiction.

We're only a few months away from the *New Horizons* spacecraft's arrival in the Pluto system.

When that happens the United States will have flown by or visited every single planet and dwarf planet in the solar system and we have a spacecraft that is already flying and operating outside our solar system – in interstellar space.

We're moving beyond the limits of our own imagination … and it's your generation – each and every one of you in the Class of 2015 sitting here today – that is going to push us there; that is going to prove something President Kennedy said (and I quote) *"No problem of human destiny is beyond human beings*." (End quote)

I want to invite you to close your eyes for a moment – imagine a future where human beings and robots work together to pioneer Mars and the Solar System. Graduates, you are this future!

You're part of the generation that will travel to an asteroid … that will walk the face of Mars … and, yes … will return home safely. Today, we're further along on our Journey to Mars than ever before in human history and it's your generation that's going to complete this journey. You're going to land human beings on Mars. Think about that for a moment. The feet in the first boots on the Red Planet could be here with us today.

Perhaps your own children and grandchildren will never know a time when human beings haven't been living on Mars.

In his State of the Union Address back in January, you might have heard President Obama declare that we're pushing out into the Solar System not just to visit but also to stay. This isn't science fiction – it's your generation's future … and the task of building this future, this better society, is up to you.

CONCLUSION

Class of 2015, while no one can tell you for sure where our world is headed in the years to come, I believe that your generation will take us to a better place. A place worthy of the planet I've been blessed to see from space -- where its serenity and lack of political borders belies the truth of what sometimes happens on the ground.

I fully expect that you will direct us into the better future we hold in our hearts; that you'll build a better West Virginia, a better America, and a better planet.

When Katherine Johnson's mother warned her that she was moving to Virginia during a tough time in American history for

black women and men, she responded "*Well, tell them I'm coming."*

Perhaps you will say the same thing, as you move on to this next step in your life, in times when your country, your community, and your planet need you. If they tell you it can't be done – tell them you're coming!

Congratulations Class of 2015! Godspeed. God bless you. And God bless America.